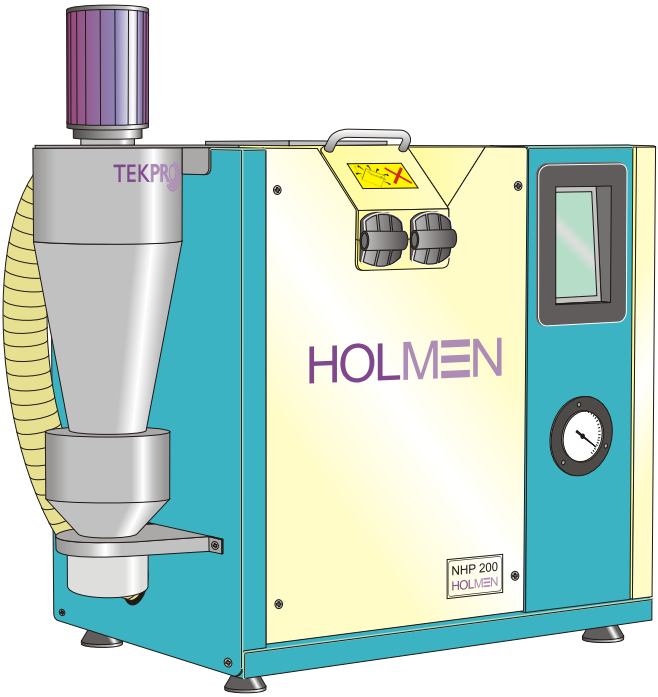
NHP 200

New Holmen Automatic Pellet Tester



Operation Manual

HOLMEN®

strength in pellet durability

Version 1.2

Safety

Assurance

Consistency

TEKPRO®

Developing, making and marketing technology

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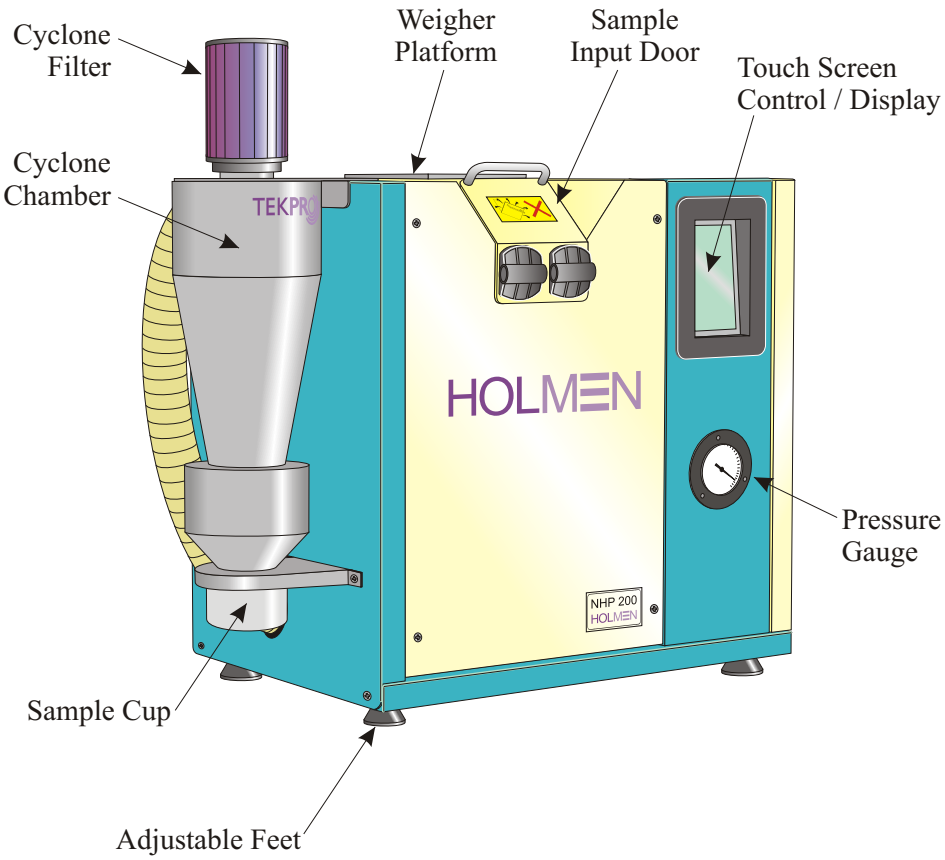
NHP200 NEW HOLMEN AUTOMATIC PELLET TESTER

Initial Setup

Locate the NHP200 on a flat level surface that is free from vibration.
Using a level placed on top of the Tester adjust the feet on the bottom of the Tester so that its sits level (ensure the Tester is stable once when finished).
Connect the Mains Power supply lead. Connect the Printer (if supplied)

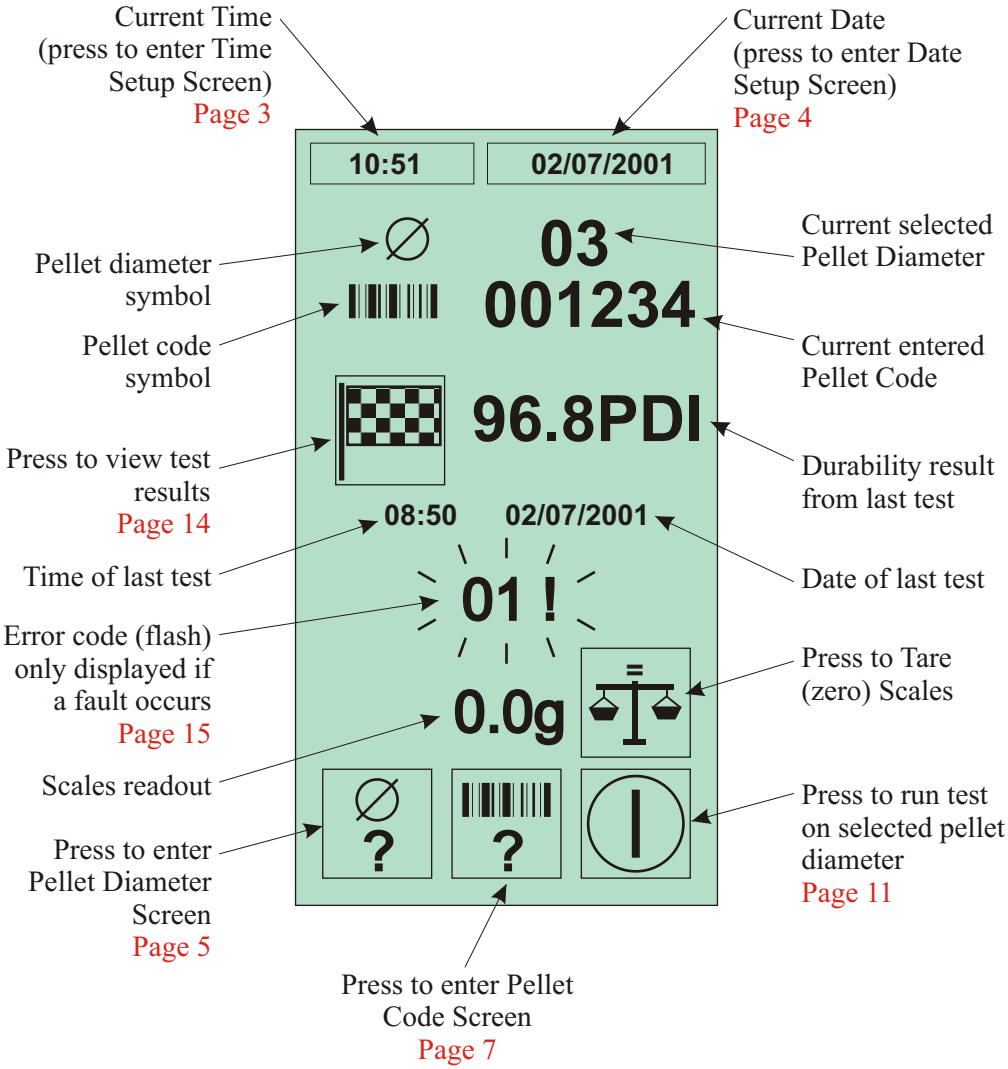
NHP200 Pictorial Description



OPENING SCREEN

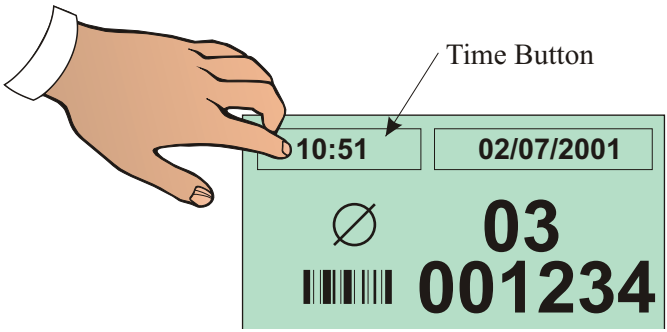
When the NHP200 is first switched on the opening screen is shown as follows :

It is recommended that Time and Date are set at this point.

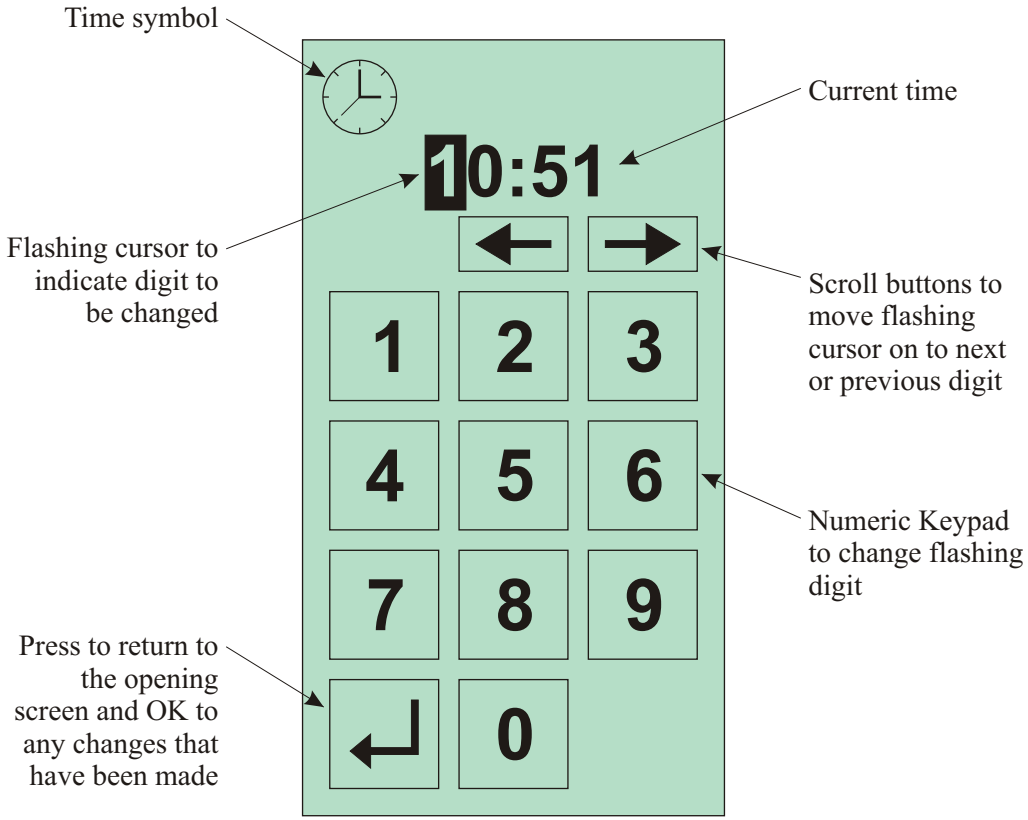

Current Time (press to enter Time Setup Screen) Page 3
Current Date (press to enter Date Setup Screen) Page 4
10:51
02/07/2001
Pellet diameter symbol
03
Current selected Pellet Diameter
Pellet code symbol
001234
Current entered Pellet Code
96.8PDI
Press to view test results Page 14
Durability result from last test
08:50
02/07/2001
Time of last test
Date of last test
Error code (flash) only displayed if a fault occurs Page 15
01 !
Press to Tare (zero) Scales
0.0g
Scales readout
Press to run test on selected pellet diameter Page 11
Press to enter Pellet Diameter Screen Page 5
Press to enter Pellet Code Screen Page 7

SETTING THE CURRENT TIME

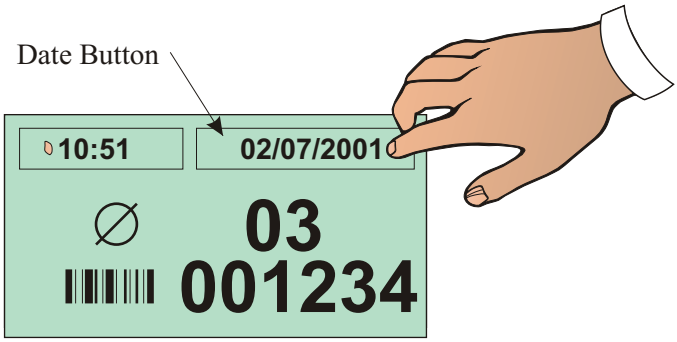
The time and date values are used to time stamp each test as it is performed.



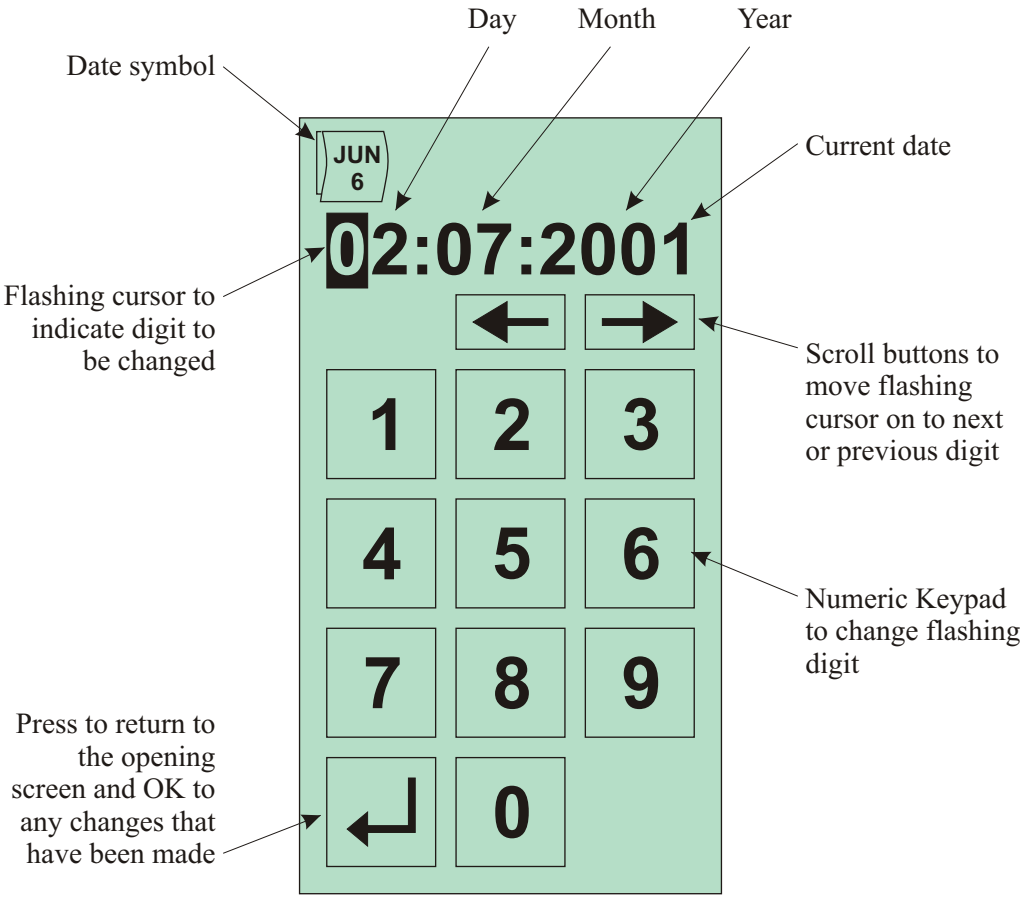
Press the Time Button on the opening screen. The following display will appear.



SETTING THE CURRENT DATE



Press the Date Button on the opening screen. The following display will appear.

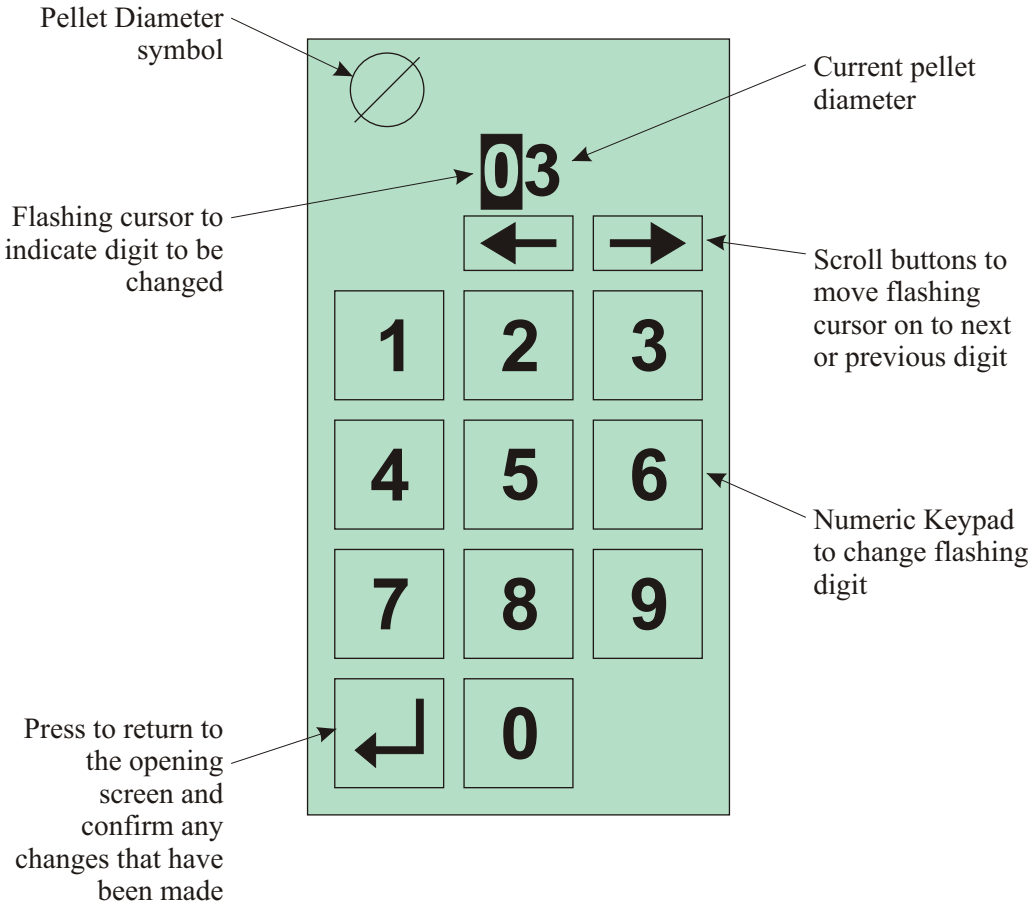


SETTING THE PELLET DIAMETER

Press the Pellet Diameter Button on the opening screen.

The following display will appear.

This screen allows the user to select the diameter of pellets that will be subject to the durability test. Each pellet diameter will have its own default Pre-test and Test time value.



SETTING THE PELLET DIAMETER Cont .....

Below are listed the system Test times in relation to pellet diameter. These times are used when one of the following pellet sizes are selected for testing purposes.

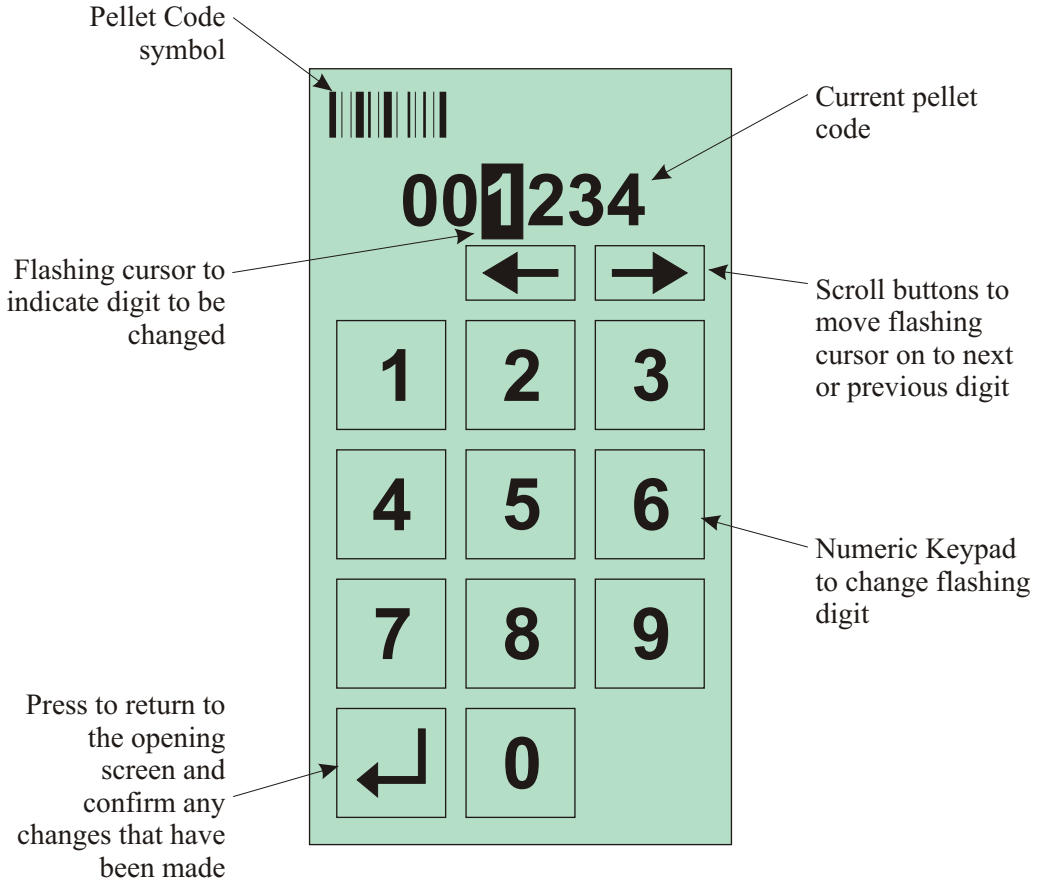
Pellet Diameter	Test Time (sec)
3	60
4	80
5	100
6	120
7	140
8	160
9	180
10	200
11	220
12	240

SETTING THE PELLET CODE

Press the Pellet Code Button on the opening screen.

The following display will appear.

This screen allows the user to enter up to a 6 digit code for the pellets that will be subject to the durability test. This can be used to help with pellet identification and if printed is connected will also appear on the result line as each test is completed.

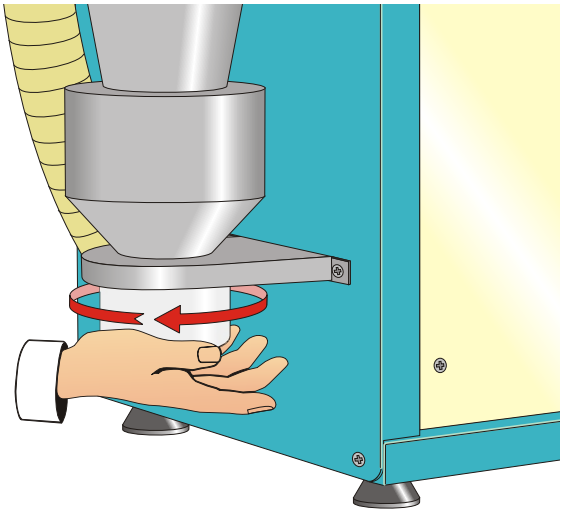


TESTING PELLETS

Once the Pellet Diameter and Pellet Code have been set the tester is ready to perform a durability test.

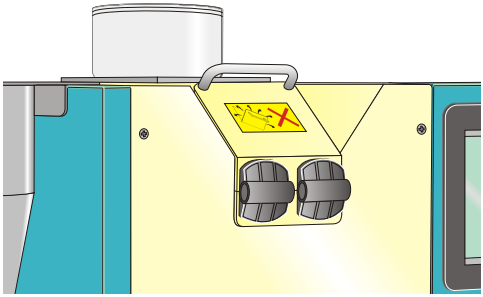
1

Unscrew the Sample Cup from the bottom of the Cyclone Chamber



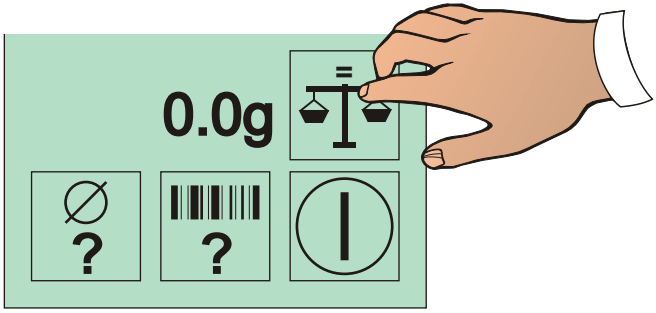
2

Place the empty Sample Cup on to the top of the Weigher Platform

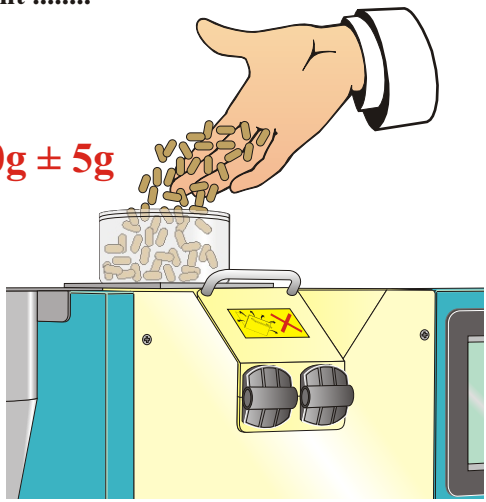


3

Press the Scales Symbol on the Touch Screen Control to Tare (zero) the Display

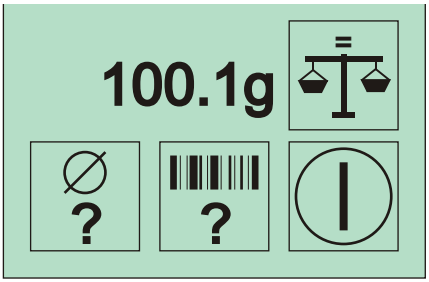


TESTING PELLETS Cont .....



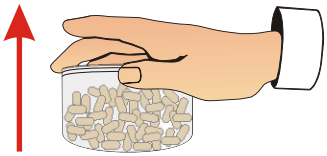
4

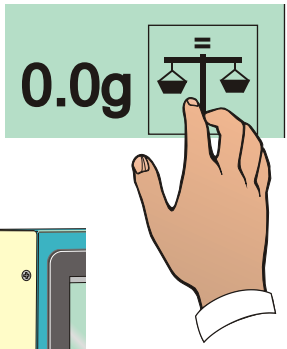
Weigh out a 100g Pellet Sample ± 5g into the Sample Cup



5

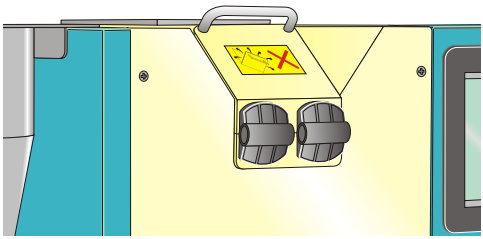
The Sample Weight will be displayed on the Touch Screen Control





6

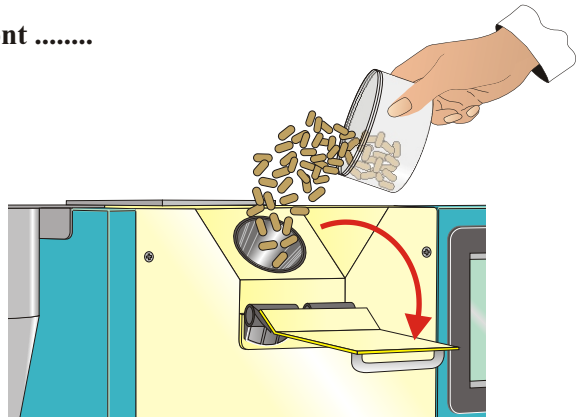
Remove the Sample Cup from the Weigher Platform and once again press the Scales Symbol on the Touch Screen Control to Tare (zero) the Display



TESTING PELLETS Cont .....

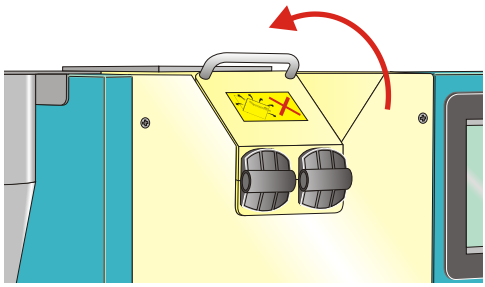
7

Open the Sample Input Door and empty the Sample Cup into the Tester



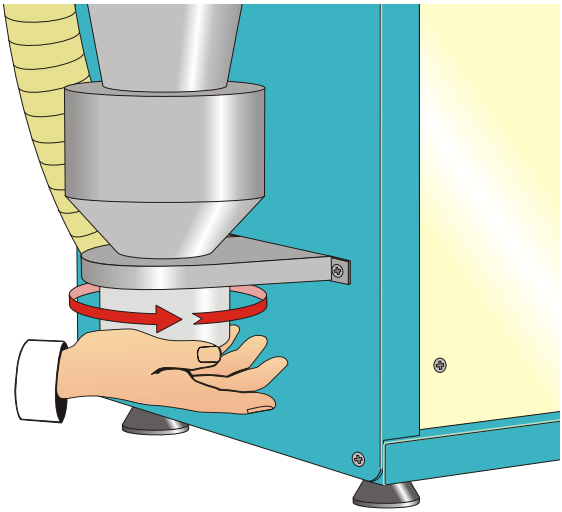
8

Close the Sample Input Door



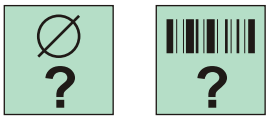
9

Screw the Sample Cup back into position on the bottom of the Cyclone Chamber



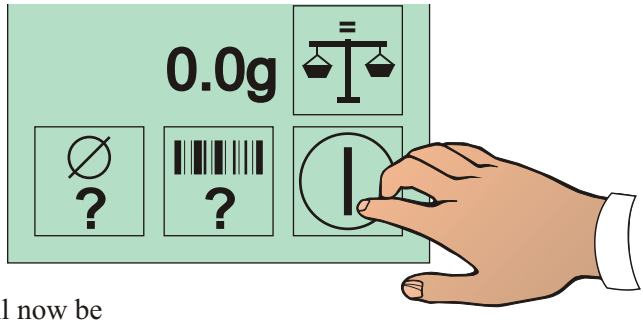
10

Check Pellet Diameter and Pellet Code have been set correctly



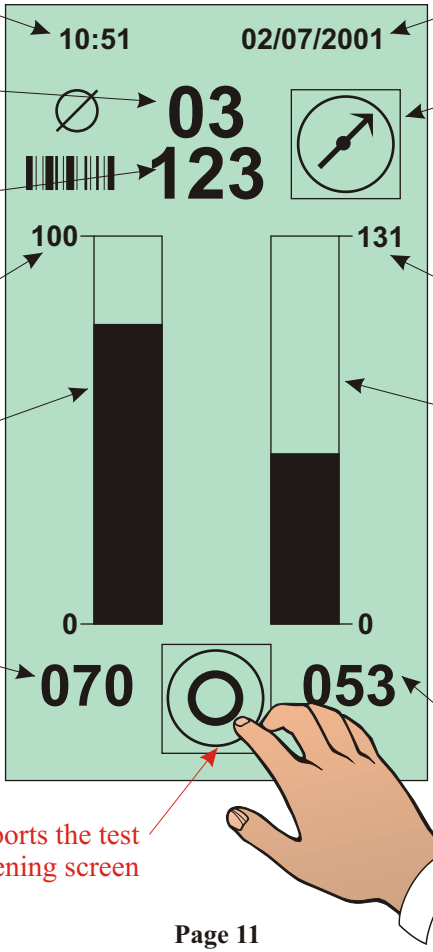
11

Press the Start Button on the Touch Screen Control



The Testing Screen will now be displayed and the sequence will begin

12



Current Time

Current Date

Selected Pellet Diameter for Testing.

Icon will change to indicate each step of the testing sequence

Selected Pellet Code for Testing.

Fixed scale.

Total test time

Graphical display showing pressure.

Graphical display showing time until test finishes. This figure is calculated from the totals for Testing and Delays entered into the system

Actual pressure

Actual run time

Stop button aborts the test and returns to opening screen

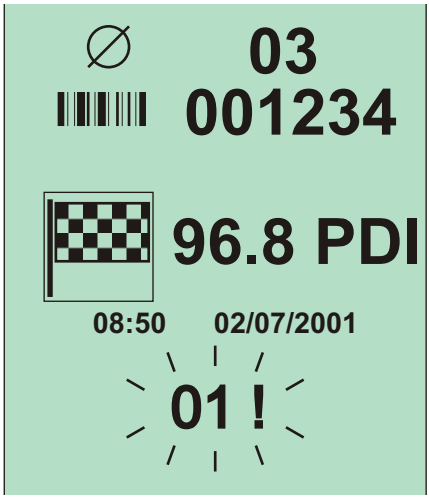
TESTING SEQUENCE

The following table defines the sequence of events once the test procedure has been started and indicates the icons displayed on the Testing Screen

Op #	Operation	Icon
1	Sieve / Hopper is closed	
2	Sieve / Hopper is opened	
3	Sieve / Hopper is closed	
4	Blower runs at 30mBar	
5	Blower is stopped	
6	Sieve / Hopper is opened	
7	Sample 1st weigh	
8	Sieve / Hopper is closed	
9	Blower runs at 70mBar	
10	Blower is stopped	
11	Sieve / Hopper is opened	
12	Sample 2nd weigh	
13	Blower runs at 100mBar	
14	Blower is stopped	
15	Durability is calculated	
16	Results are displayed	

13

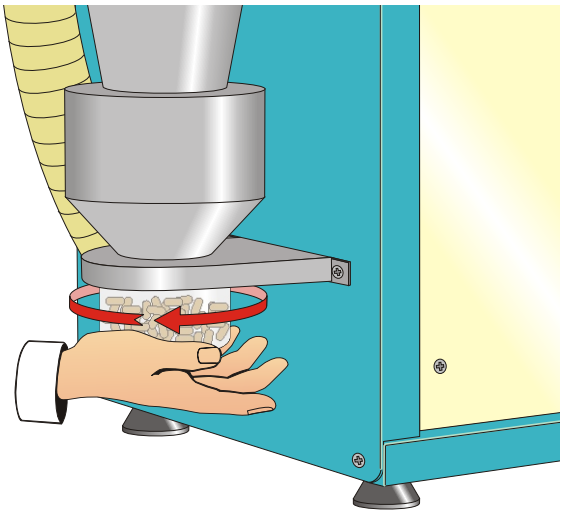
Once the test sequence has finished the display will return to the opening screen and the result will be displayed. The result will also be sent to the Printer if connected



Any error during test will be displayed as a flashing error code (see page 12)

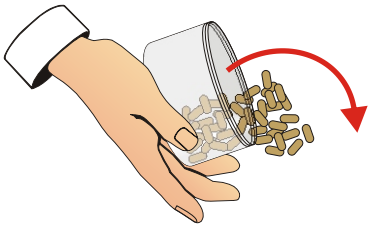
14

Unscrew the Sample Cup on the bottom of the Cyclone Chamber



15

Dispose of the sample and re-screw the Sample Cup back into position

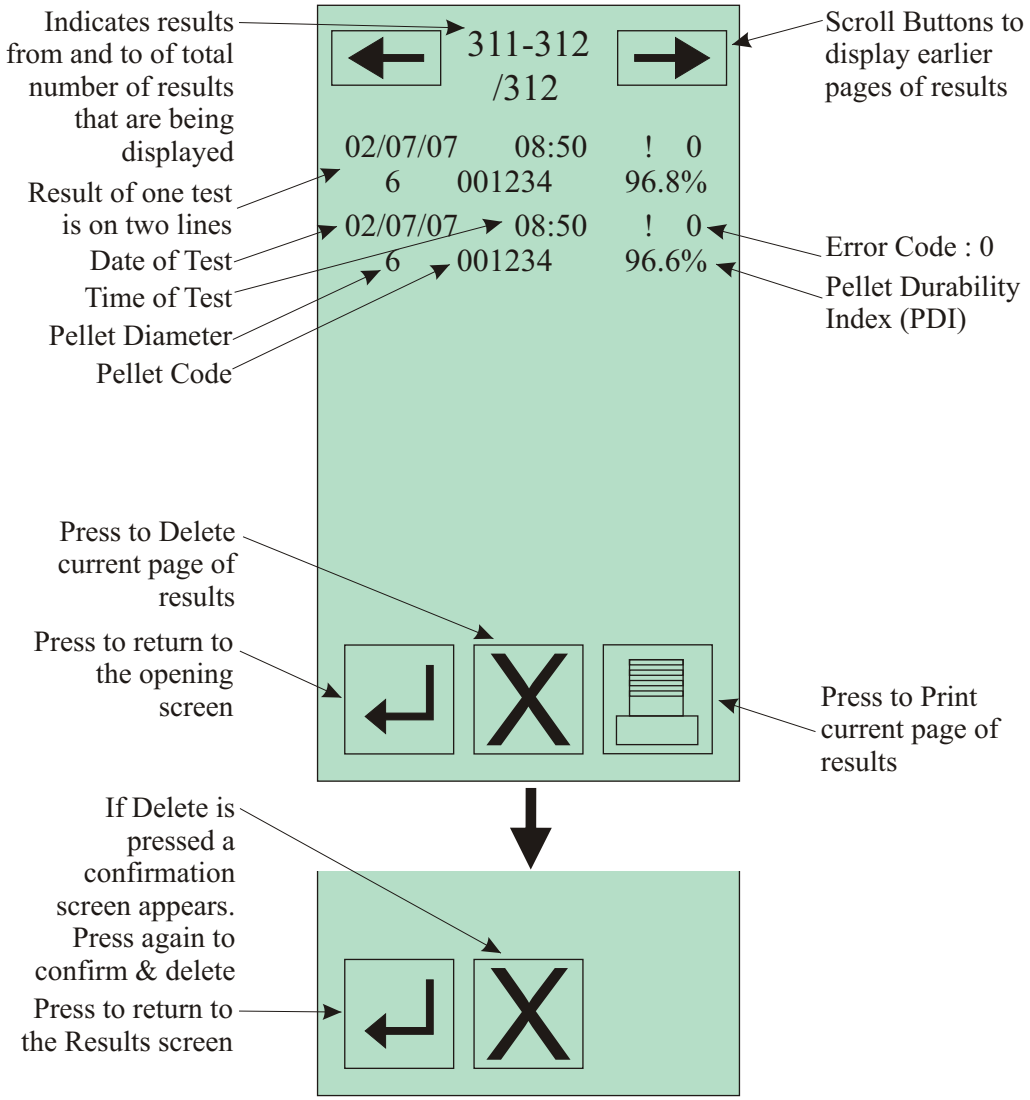


VIEWING THE TEST RESULTS

Press the Results Button on the opening screen.

The following display will appear.

This screen allows the user to view, print or delete test results. A page at a time may be printed or deleted.
2047 results can be stored before the counter rolls over to zero.


Indicates results from and to of total number of results that are being displayed
311-312
/312
Scroll Buttons to display earlier pages of results
02/07/07 08:50 ! 0
6 001234 96.8%
Result of one test is on two lines
02/07/07 08:50 ! 0
Date of Test
Time of Test
Pellet Diameter
Pellet Code
6 001234 96.6%
Error Code : 0
Pellet Durability Index (PDI)
Press to Delete current page of results
Press to return to the opening screen
Press to Print current page of results
If Delete is pressed a confirmation screen appears. Press again to confirm & delete
Press to return to the Results screen

ERROR CODE DESCRIPTIONS

The system has a number of error codes that will be display when an incorrect condition is present. If a problem is encountered during the test sequence the test will abort and the display will flash the relevant error code.

Code	Fault Description	Remedy
! 00	No error Condition (not displayed)	None
! 01	Sample is under the 80g limit	Insert a sample that is not under the specified under weight limits.
! 02	Sample is over the 120g limit	Insert a sample that is not over the specified over weight limits.
! 03	Weigher fault	Reset Tester.
! 04	No air pressure (<10mBar) **If no pressure the Tester will abort and will not run until fault is corrected (Test button will disappear).**	Check Blower is operating. Check air pressures and re-calibrate if necessary.
! 05	Test pressure out of range (66-74mBar)	Check air pressures and re-calibrate if necessary.
! 06	Cooling pressure out of range (26-34mBar)	Check air pressures and re-calibrate if necessary.
! 07	Drive board malfunction	Reset Tester.
! 08	Interface processor malfunction	Reset Tester.
! 09	Loss of pre-set parameters	Reset Tester.
! 10	Last test aborted by operator	None.
! 11	First weigh < second weigh	Reset Tester and re-test pellets.

If any of the above faults continue contact your After Sales Agent.

FAULT FINDING **Refer to Setup / Technical Manual for further information where necessary**

Problem	Possible Cause	Corrective Action
Pellet Tester will not function.	Not connected to supply.	Check connections.
	Not switched on.	Check on/off switch.
	Damaged fuse.	Check fuses on Driver PCB.
	Interface PCB malfunction.	Check Interface PCB connections.
	Driver PCB malfunction.	Check Driver PCB connections.
Excessive dust.	Damaged window seals.	Replace seals.
	Damaged seal around Sample Input Door.	Replace seal.
Pellets not circulating in Hopper.	No air flow.	Check Blower is operating.
	Incorrect Pressures.	Check pressures and re-calibrate if necessary.
Insufficient pressure.	Damaged plenum seals.	Replace seals.
	Calibration error.	Re-calibrate
	Blower malfunction.	Check Blower.
Scales not operating.	Power not connected.	Check connections.
Inconsistent results.	Tester has been disturbed.	Let Tester carry out several tests to stabilise.
Touch Screen Control not operating.	Touch Screen / Interface PCB locked.	Reset Tester.

For further information, replacement parts or if any of the above faults continue, please contact your After Sales Agent.

NHP200 MACHINE DATA & SPECIFICATION

Pellet Test

Depth	400 mm
Width	720 mm
Height	700 mm
Weight	50 kg
Colour	Cream RAL 1015 Semi Gloss Green/Blue RAL 5021 Semi Gloss

Power Supply

Voltage	110v 230v
Cycles	50 / 60 Hz
Power	1350W
Fuse Rating	13A 5.6A

All electrics comply with the EC Directive on Low Voltage 73/23/EEC

Pellet Range
3mm < 12mm Diameter - Maximum 30mm long

Pressure Setting

Cooling Cycle (Pre-Test)	VR2 30 mBar
Testing Cycle	VR3 70 mBar
Purging Cycle	100mBar

Temperature
The NHP200 should be operated within an ambient temperature of between 18º C and 28º C to ensure consistent results.

Noise Levels
83 db without pellets at one metre. Noise levels will vary depending on the type and size of pellet under test.

Note : It is recommended that ear protection is worn when working near the Pellet Tester.

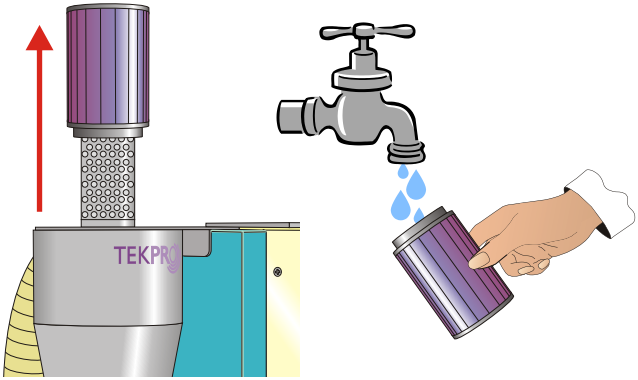
Maximum Weigher Platform Loading - 500g

GENERAL MAINTENANCE

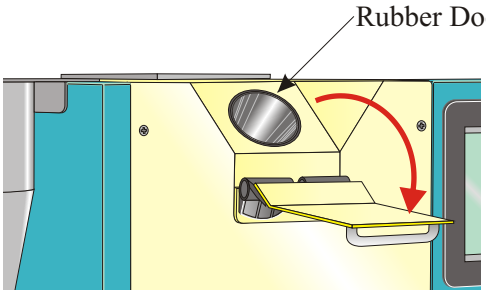
It is recommended that periodically the following general maintenance is carried out.

Turn 'OFF' the Pellet Tester and isolate the mains supply before any maintenance work is carried out.

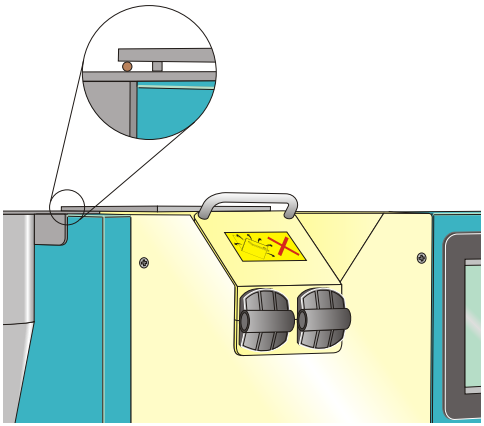
Remove the clip from around the Cyclone Filter. Wash the Filter and leave to dry thoroughly before securing back onto Cyclone



Open the Sample Input Door and check the condition of the rubber seal. A damaged seal will have an affect on the performance of the Tester

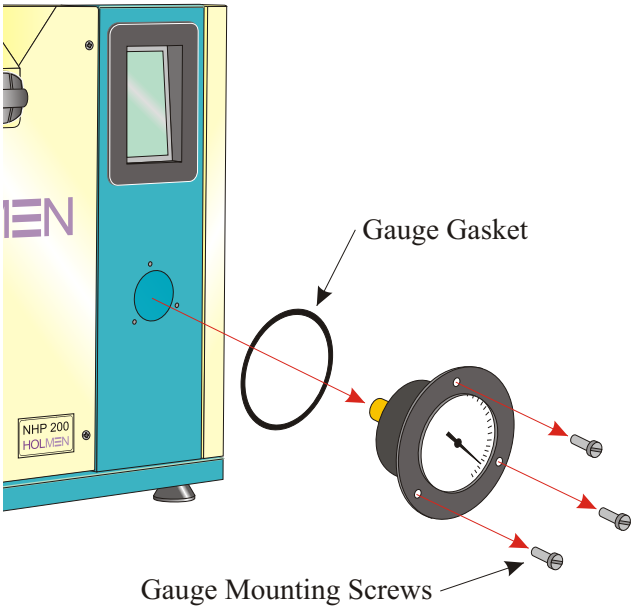


Check for any pellets or foreign objects under the Weigher Platform that may have an affect on the performance of the Scales



Check pressure calibration and re-calibrate as necessary.

Calibration ± 3mBar



The Pressure Gauge comes with a 12 month Calibration that is valid from the date stated on the Calibration Certificate. After the 12 month period has ceased the Pressure Gauge can be removed and re-calibrated (Contact your After Sales Agent for more information).

DECLARATION OF CONFORMITY

Equipment Description NHP 200 - New Holmen Automatic Pellet Tester

Manufacturer

TekPro Limited
Willow Park
North Walsham
Norfolk
NR28 0BD
United Kingdom

United Kingdom regulations

The Supply of Machinery (Safety) Regulations 1992 (S.I. 1992/3073) as amended.
The Electrical Equipment (Safety) Regulations 1994 (S.I. 1994/3260) as amended.
The Electromagnetic Compatibility Regulations 1992 (S.I. 1992/2372) as amended.

European Directives

Council Directive 98/37/EC for Machinery as amended.
Council Directive 73/23/EEC for Low Voltage Directive as amended.
Council Directive 89/336/EEC for Electromagnetic Compatibility as amended.

Declaration We hereby declare that the New Holmen Automatic Pellet Tester complies with the Council Directives stated above.

Date 20th February 2007

Signed ..... D. Catchpole
Technical Director

Sales and After Sales Contact Information

TekPro Limited
Willow Park
North Walsham
Norfolk
NR28 0BD
United Kingdom

Tel : +44 (0) 1692 403403
Fax : +44 (0) 1692 404955
Email : holmen@tekpro.com
Web : http://www.tekpro.com
http://www.holmenfeed.com
http://www.holmenwood.com

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TekPro Ltd
Willow Park
North Walsham
Norfolk
NR28 0BD UK

Tel +44 (0) 1692 403403
Fax + 44 (0) 1692 404955
Email info@tekpro.com
Web www.tekpro.com

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